

Pressure and
Environment
271

RESOURCES

Regional
rents

286

and the

296

Issues and

310

re and
uje Area

324

ern of
Area,

340

Urban

351

PART FIVE: ENVIRONMENTAL ISSUES IN SUSTAINABLE AGRICULTURAL DEVELOPMENT

- CHAPTER 20** Tackling African Food Crisis through Sustainable Agricultural Development
A.M. Tunde 365

- CHAPTER 21** Simulating the Impact of Tillage Methods on Biophysical Parameters in River Oyun Catchment Area, Kwara State, Nigeria
T. M. Agaja and L. T. Ajibade 382

- CHAPTER 22** Land management Practices and Sustainable Crop Production in Nigeria
B. R. Atiyong and E. O. Oriola 401

- CHAPTER 23** Desertification and the Challenges of Sustainable Rural Development: The Experience of Katsina State, Nigeria
O.Y. Yahaya 417

PART SIX: ENVIRONMENTAL CHALLENGES ASSOCIATED WITH URBAN AND RURAL DEVELOPMENT

- CHAPTER 24** Environmental Threats to Sustainable Tourism Development
A. Adedayo and E. E. Adeniyi 439

- CHAPTER 25** Building Resilience in Environmental Challenges to Rural Productions and Development.
R. A. Olawepo 452

- CHAPTER 26** Participatory Slum Appraisal as a Strategy for Sustainable Urban Development
N. A. Malik 473

PART SIX
ENVIRONMENTAL CHALLENGES ASSOCIATED
WITH URBAN AND RURAL DEVELOPMENT

CHAPTER 24

**Environmental Threats to Sustainable Tourism
Development**

Adebisi Adedayo and Enekole Adeniyi

Introduction

As one of the largest and fastest growing sectors in the world, tourism has become the main economic activity creating much needed job opportunities and bringing in important income and foreign exchange earnings. In many countries especially the developing economies and regions, tourism is identified as an activity that has a central role to play in the achievement of sustainable development goals. However, in the analysis of tourism development, emphasis is placed on economic return and opportunities while little attention is paid to the impact of the environment which is its most fundamental ingredient. Yet, tourism and the environment are so clearly and closely related that without an attractive environment, tourism cannot succeed. For many tourists, the desire to move to and stay in a seemingly pristine and serene environment is strong and tourism takes place in the world's most attractive environments. As Mathieson and Wall (1982:97) put it: in the absence of an attractive environment, there would be little tourism. Ranging from the sun, sea and sand to the undoubted appeal of historic sites and structures, the environment is the foundation of the tourism industry.

Although the contribution of the environment to tourism seems to be significant, but in many places tourism development has led to environmental deterioration. This emphasizes the need to consider

the key environmental challenges that stand in the way of establishing and maintaining a sustainable tourism system. The purpose of this chapter is therefore, to examine the major environmental challenges in the growth and spread of tourism and the challenges posed for sustainable tourism development. In order to provide a framework for the analysis, the concept and content of the environment and the concept and principle of sustainable tourism development are discussed in the next two sections.

The Environment: Concept and Content

As a concept, the 'environment' has been variously defined, interpreted and applied. Its scope and content also vary by discipline depending on the purpose for which it is employed. At the level of common usage, the term 'environment' may be simply defined as everything surrounding man and affecting his life and development. It can therefore be considered as a number of factors which influence location and activity. Aina (1991), employing the concept for the purpose of FEPA formulation of policy for the environment views environment as all physical and biological systems in which other organisms live. Baba (1992) conceptualizes the environment as the component and systems of the geosphere (e.g soil, flora, climate) as is applicable in natural sciences on the reservoir of resources on which man draws to sustain his economic activities and assure his survival and well-being. In his own contribution, Williams (1998) defined the environment as the complex physical, economic or social entities, in which there are interrelationships that extend the final effect of change well beyond the initial course. As stated, in the Federal Environmental Protection Agency (FEPA) document, the environment includes water, air, land, plant, animals and human beings living therein and the inter-relationships that exist among them (FEPA, 1989). The term 'environment' may therefore be used to denote 'all encompassing view of both the natural and social world'.

A review of the concepts of the environment puts its content into a much wider geographical perspective consisting of the physical and human environment. On the one hand, the physical environment includes relief (hills, mountains, rocks, caves etc), springs, lakes and rivers, beaches, climate/weather characteristics (e.g rainfall and temperature seasonality), flora and fauna. On the other hand, the human environment consist of human activities or man-made objects and institutions created on the physical environment such as agriculture, industries, settlements, parks, factories, hospitals, roads, vehicles, airports and other infrastructure. The physical (natural) and human (man-made) elements of the environment are alluring features and good sites for leisure adventure and other tourism-related endeavors which, if not properly managed can usher in unsustainable tourism development with adverse effects on the environment on which tourism depends.

Sustainable Tourism Development

The term 'sustainable development' emerged in the 1970s as the principal concept in the development field and was promoted in the international environmental and development communities with the publication of the 'world conservation strategy' in 1980 (IUCN, 1980). As the demand for more environmentally sensitive and sustainable practices grew rapidly in the 1980s, sustainable tourism began to be used but the term 'green tourism' was more widely used. However, the concept of sustainable development and the idea of sustainability was transferred to tourism following the popularization of sustainable development as an environmental management concept by the publication of the Brundtland Commission's report in 1987 (WCED, 1987). Sustainable tourism development should therefore be seen as an adaptive paradigm, a part of parental concept of development and sustainable development. In this regard, Tosun (1998; p.596) argues that sustainable tourism development should be accepted as all kinds of tourism development that make a notable contribution to or at least

do not contradict the maintenance of the principles of development in an indefinite time without compromising the ability of future generations to satisfy their own needs and desires. In this connection, Butler's (1993,p29) definition of sustainable tourism development appears to make a substantial contribution to unify the concept of sustainable tourism development in the context of terms. As he put it, sustainable development with its parental tourism could be taken as 'tourism which is developed and maintained in an area (community, environment) in such a manner and at such a scale that it remains viable over an indefinite period and does not degrade or alter the environment (human and physical) in which it exist to such a degree that it prohibits the successful development and well-being of other activities and processes'.

The concept of sustainability is the bedrock of tourism development which clearly embraces the environment, people and economic systems. In this regard, WTO defines sustainable tourism as "development that meets the need of today's tourists and host regions while protecting and enhancing opportunities for the future. Sustainable tourism development means the optimal use of social, natural, cultural and financial resources for national development on an equitable and self-sustaining basis to provide a unique visitor experience and an improved quality of life through partnerships among local government, private sector and communities. It is envisaged as leading to the management of all resources in such a way that economic, social and aesthetic needs can be fulfilled as well as maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems (WTO, 1998). Various definitions have been put forward by other scholars including Dowling and Fennell (2003) who envisaged sustainable tourism development as leading to the management of all resources in a way that it can fulfill economic, social and aesthetic needs while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems. In this way, they believe

that the goals of sustainable tourism development are to:

- (i) develop greater awareness and understanding of the significant contributions that tourism can make to the environment and society,
- (ii) promote equity in development
- (iii) improve the quality of life of the host community,
- (iv) provide a high quality of experience form the visitor and
- (v) maintain the quality of the environment on which the foregoing goals are depend.

From the studies in the tourism literature that have incorporated the conceptual arguments for sustainable development and sustainable tourism development, it may be useful to highlight some principles of sustainable tourism development. Thus, as articulated by Tosun (2001), the principles of sustainable tourism development should:

- a) contribute to the satisfaction of basic and felt needs of those hitherto excluded in local tourist destinations,
- b) reduce inequality and absolute poverty in local tourist destinations,
- c) contribute to the emergence of necessary conditions in tourist destinations which will lead local people to gain self-esteem and to feel free from the evils of want, ignorance and squalor. This implies that sustainable tourism development should help host communities to be free or emancipated from alienating material conditions of life and from social servitude to nature, ignorance, other people, misery, institution, and dogmatic beliefs.
- d) accelerate not only national economic growth, but also regional and local economic growth. This growth must be shared fairly across the social spectrum, and
- e) achieve the above listed principles in an indefinite period of time without compromising the ability of future generations to meet their own needs.

The above mentioned principles underscore the fact that the 'remit of sustainable tourism development is extended to consider the role of tourism in contributing to sustainable development more generally (Hunter, 1997, p.860, cited in Tosun, 2001). This implies that sustainable tourism, as an adaptive paradigm is a multi-disciplinary and multi-dimensional concept which touches upon a wide gamut of issues such as development policy, environmental matters, social factors, structures of the tourism system, among others.

Generally, sustainable tourism development idea appears to be beneficial. If implemented, it can minimize most of the negative impacts of mass tourism while inducing many alternative forms of tourism such as eco-tourism. However, there are certain environmental issues and challenges militating against the goals of sustainable tourism development which warrant detailed examination.

Environmental Issues in Sustainable Tourism Development

In order to provide a proper context for the analysis of environmental challenges to sustainable tourism development, it is necessary first to break tourism into its essential components. This is because the relationship of tourism with the environment is complex and involves the movement, stay and activities of tourist in destination for a variety of purposes. In this regard, the tripodal structure of tourism consists of travel, stay and purpose. While travel implies transportation, stay refers to hospitality and purpose denotes destination, activities and motivation, all which occur in the natural environment. The major environmental challenges to sustainable tourism development may therefore be usefully considered in four main categories, although there is some overlap between them. These are tourist travel, tourism destination development, tourism associated activities, and global warming and climate change.

Tourist travel is highly dependent on high energy transport mainly by air and high luxurious accommodation which pose various adverse environmental threats to sustainable tourism development. A typical challenge is pollution from increasing levels of transport in response to the rising number of tourists and their mobility to and from various tourist attractions. Pollution of the natural environment and damage to the quality of landscapes comes from all transport modes including cars, buses, aircraft, ferries, railway coaches etc. Air pollution emanates from automobiles which emit by far the most carbon monoxide of all transport modes. According to the U.S. Environmental Protection Agency (EPA) (1998 December, Table A-1), automobiles emitted 26 million short tons of carbon monoxide compared with 1.7 million short tons from recreational marine vehicles and 1 million from aircraft. In spite of the absence of specific data on tour bus emissions, all heavy-duty vehicles including tour buses emitted 1.4 million short tons in 1997.

As tourism is mainly associated with air transport, air travel worldwide is ever increasing such that one-fifth of the world's population now travel by air. In consequence, tourist travel now account for more than 60% of air travel and is therefore responsible for a significant share of air pollution. For instance, UNEP and UNWTO (2007) estimated that tourism is responsible for about 5% of global carbon dioxide (CO₂) emissions. The accommodation component accounts for approximately 20% of emissions from heating, air conditioning etc. As reported in UNWTO's study, emissions from associated tourist activities are directly related to how much fossil fuel energy is consumed. In this connection, large hotels have been observed to generate more emissions than guest houses, self catering apartments on campo grounds because they use more energy to operate extra facilities such as restaurants, bars, swimming pools and spas. Also, water skiing results in more emissions than hiking while amusement parks have more emissions than rafting (UNWTO, 2008).

Noise pollution from airplanes, cars, heavy duty diesel tour buses and recreation vehicles such as snow mobile and jet skis is another major challenge to sustainable tourism development. Apart from causing nuisance, stress and hearing loss to humans, it causes distress to wildlife especially in parks and other sensitive areas. Furthermore, in areas with high concentration of tourist activities and appealing natural attractions, effluent discharge, solid waste and littering pose serious challenge and can be a major despoiler of land, rivers, scenic areas, and road sides. Solid waste and littering can even degrade the physical appearance of the water and shoreline and cause the death of marine animals. For instance, cruise ships are estimated to generate more than 70,000 tons of waste each year in the Caribbean (UNEP, 1997). In a Nigerian natural attraction area, Olokesusi (1990) observed that waste water generated chalet, catering houses and other installed tourist facilities is inevitably discharged into surface and groundwater regimes which end up polluting springs and rivers. Pollution of surface water reduces their amenity value as tourist resources and often hampers water utilization downstream.

In the process of tourism destination development, several types of environmental challenges are created which may stand in the way of establishing and maintaining a sustainable tourism system. An important issue is environmental degradation resulting from the construction of tourist infrastructure. In this regard, ecosystem and natural habitat have and continue to be damaged by tourist infrastructure, tourist activities, recreational boating and the cruise industry. Although necessary, removal of flora for construction of chalet, viewing tracks and recreational facilities has the effect of destroying the vegetation and landscape as a result of exposure to attacks by wind, sun and soil erosion.

If ecosystems are viewed as geographical areas including all the living organisms (i.e. people, plants, animals, and microorganism),

their physical surroundings (such as soil, water and air), and natural cycles that sustains them, threat to and pressures on these ecosystems are often severe because such places are very attractive to tourist and tourism destination developers. The ecosystem most threatened with degradation is ecologically fragile areas such as alpine regions, rain forest, wetlands, mangroves, coral reefs and sea grass beds. Wetlands have been destroyed in order to build tourist related infrastructure such as airports, roads and marinas. For example, in Jamaica, Bacon (1987, pp 105-6) observed that 700 acres of wetlands have been destroyed since the 1960s for tourism development. Deforestation and unsustainable use of land for construction of ski resort accommodation and facilities have caused several erosion and destruction of the local ecosystem in the long term. In this way, coastal wetlands are often drained and filled due to lack of more suitable sites for construction of tourism facilities and infrastructure. Loss of bio-diversity therefore reduces the enjoyment that tourists experience when visiting areas by reducing the variety and wealth of flora and fauna available.

In relation to tourism associated activities, it is worth drawing attention to the challenges of park-based tourism activities. While a primary objective of establishing national parks is the use of bio-diversity-rich resources as tourist resort for recreational purposes such as game viewing, bird watching, boating and swimming, sport fishing and mountain climbing among others, tourist activities within and around national parks are beset by socio-economic, cultural and ecological problems which are in conflict to the parks management goals and activities. With the Nigerian situation in mind, Adedayo (2003) observed that these problems stem from human interaction with the ecosystem and include:

- a. habitat degrading due to illegal activities by hunters, farmers, fisherman, settlers, and nomadic cattle grazers. As a result of sociological and economic reasons, people engage in poaching wildlife resources by employing different

strategies to beat the park authorities. Several conflicts have indeed resulted between indigenous peoples and the park personnel leading to loss of lives;

- b. existence of many settlements within the surrounding areas and buffer zone of the parks which host local farmers and hunters who collaborate with farmers and hunters from other parts of the country to rub the parks of their numerous tourist-based resources;
- c. some areas within the parks have been illegally occupied for farmlands, settlements and other unauthorized infrastructure which hamper the development of sustainable ecotourism.
- d. Park management bases in favor of the production of flora and fauna to the detriment of the livelihood and conditions of life of the local inhabitants in the surrounding areas of the parks, giving rise to the problem of inadequate local participation in the programme of the parks and little cooperation and loyalty of the communities.

Another important threat to tourism sustainability is the existence of social conflicts. As one of the income and employment generating industries, tourism is also one of the most exposed sector to social conflicts. This is in line with Butler's (1980) argument that the number of tourist demands and visitors to a particular destination may decline in environment of social conflict. Buttressing this argument, Tribe (2010) observed that crisis could affect tourism in terms of poor business strategies employment redundancy, poor infrastructures and damage to properties. Nigeria exemplifies this situation where Boko Haram Islamist terrorist group attacks since 2009 have drastically affected social life of citizens, public properties, business activities particularly eco-tourist flows in the north-east areas such as Borno, Yobe, Gombe, Adamawa, Taraba and Bauchi states.

One of the main environmental threats to sustainable tourism development globally is the issue of global warming and climate

change. Climate scientists now generally agree that the Earth's surface temperature have increased steadily in recent years as a result of an increase in greenhouse gases (GHG) emitted into the atmosphere due mainly to human activities such as burning fossil fuels (coal, oil and gas), bush burning, deforestation etc. One major consequence of global warming and climate change is the negative effects it may have on tourism destination, competitiveness and sustainability. As an essential resource for tourism, climate co-determines the sustainability of locations for a wide range of tourist activities, a major driver of global seasonality in tourism demand and has an important influence on operating costs, such as heating-cooling, snow making, irrigation, food and water supply, and insurance costs. Thus, climate-induced environmental changes like rise of sea levels, scarcity of water, biodiversity loss, melting snow and glaciers, deforestation, reduced landscape aesthetic, coastal erosion and inundation, increased natural hazards, damage to infrastructure, altered agricultural production (e.g. wine tourism) and the increasing incidence of vector-borne disease could have profound effects on tourism development at the destination and regional level.

Conclusion

This chapter presents amply evidence to support the assertion that there are major environmental threats to sustainable tourism development. It is recognized that environmental elements pose short and long term challenges to tourism development, just as tourism activity impacts negatively on the environment to the detriment of the growth and spread of sustainable tourism. The major environmental threats to sustainable tourism development have therefore been classified and discussed under four main categories namely: tourist travel, tourism destination development, tourism associated activities and global warming and climate change. Although, the nature and intensity of environmental challenges will vary from tourism destination around the world and could influence other economic sectors, such as agriculture and local business networks supplying tourism, the most vulnerable regions are in the developing countries which have less adaptive and instigation capacity.

strategies to beat the park authorities. Several conflicts have indeed resulted between indigenous peoples and the park personnel leading to loss of lives;

- b. existence of many settlements within the surrounding areas and buffer zone of the parks which host local farmers and hunters who collaborate with farmers and hunters from other parts of the country to rub the parks of their numerous tourist-based resources;
- c. some areas within the parks have been illegally occupied for farmlands, settlements and other unauthorized infrastructure which hamper the development of sustainable ecotourism.
- d. Park management bases in favor of the production of flora and fauna to the detriment of the livelihood and conditions of life of the local inhabitants in the surrounding areas of the parks, giving rise to the problem of inadequate local participation in the programme of the parks and little cooperation and loyalty of the communities.

Another important threat to tourism sustainability is the existence of social conflicts. As one of the income and employment generating industries, tourism is also one of the most exposed sector to social conflicts. This is in line with Butler's (1980) argument that the number of tourist demands and visitors to a particular destination may decline in environment of social conflict. Buttressing this argument, Tribe (2010) observed that crisis could affect tourism in terms of poor business strategies employment redundancy, poor infrastructures and damage to properties. Nigeria exemplifies this situation where Boko Haram Islamist terrorist group attacks since 2009 have drastically affected social life of citizens, public properties, business activities particularly eco-tourist flows in the north-east areas such as Borno, Yobe, Gombe, Adamawa, Taraba and Bauchi states.

One of the main environmental threats to sustainable tourism development globally is the issue of global warming and climate

change. Climate scientists now generally agree that the Earth's surface temperature have increased steadily in recent years as a result of an increase in greenhouse gases (GHG) emitted into the atmosphere due mainly to human activities such as burning fossil fuels (coal, oil and gas), bush burning, deforestation etc. One major consequence of global warming and climate change is the negative effects it may have on tourism destination, competitiveness and sustainability. As an essential resource for tourism, climate co-determines the sustainability of locations for a wide range of tourist activities, a major driver of global seasonality in tourism demand and has an important influence on operating costs, such as heating-cooling, snow making, irrigation, food and water supply, and insurance costs. Thus, climate-induced environmental changes like rise of sea levels, scarcity of water, biodiversity loss, melting snow and glaciers, deforestation, reduced landscape aesthetic, coastal erosion and inundation, increased natural hazards, damage to infrastructure, altered agricultural production (e.g. wine tourism) and the increasing incidence of vector-borne disease could have profound effects on tourism development at the destination and regional level.

Conclusion

This chapter presents amply evidence to support the assertion that there are major environmental threats to sustainable tourism development. It is recognized that environmental elements pose short and long term challenges to tourism development, just as tourism activity impacts negatively on the environment to the detriment of the growth and spread of sustainable tourism. The major environmental threats to sustainable tourism development have therefore been classified and discussed under four main categories namely: tourist travel, tourism destination development, tourism associated activities and global warming and climate change. Although, the nature and intensity of environmental challenges will vary from tourism destination around the world and could influence other economic sectors, such as agriculture and local business networks supplying tourism, the most vulnerable regions are in the developing countries which have less adaptive and instigation capacity.

References

- Adedayo, A. (2003) Conservation and rural poverty alleviation: Evidence from Kainji Lake National Park, Nigeria, *Journal of Environment and Behaviour Association of Nigeria*, 1, 18-22.
- Aina, E.O.A (1991) The journey so far in the making of the Nigerian Environment Policy. FEPA
- Baba, J.M (1992) Sustainable Development and the Nigerian Environment, *Nigerian Geographical Journal*, 1:1-19
- Bacon, P.R. (1987) Use of wetlands for Tourism in the Insular Caribbean, *Annals of Tourism Research*, 14, 104-117.
- Butler, W (1980) The Concept of the Tourist Area Life-cycle of Evolution: Implications for Management of Resources. *Canadian Geographer*, 24 (1) 5-12
- Butler, R.W (1993) Tourism - An Evolutionary Perspective. In J.G. Nelson, R. Butler & G. Wall, *Tourism and Sustainable Development: Monitoring, Planning, Managing*, Waterloo: Heritage Resources Centre. University of Waterloo
- Dowling, R.K and Fennell, D.A (2003) The context of Ecotourism Policy and Planning. In D.A Fennell and R.K. Dowling (Eds) *Ecotourism Policy and Planning*, UK: CABI Publishing.
- Federal Environmental Protection Agency (FEPA) (1989). *National Policy on the Environment*. Lagos: FEPA.
- Hunter, C. (1997) Sustainable Tourism as an adaptive paradigm, *Annals of Tourism Research*, 21 (4), 850-867.
- International Union for Conservation of Nature and Natural Resources (IUNC) (1980). *World Conservation Strategy: Living Resource Conservation for Sustainable Development*: Geneva.
- Mathieson, A. and Wall, G. (1982) *Tourism: Economic, Physical and Social Impacts*. Harlow: Longman.
- Olokesusi, F. (1990) Assessment of the Yankari Game Reserve, Nigeria: Problems and Prospects, *Tourism Management* June, 153-163.
- Tosun, C (2001) Challenges of sustainable tourism development in the developing world: the case of Turkey. *Tourism Management*, 22, 289-303.
- Williams, S (1998) *Tourism Geography: Routledge Contemporary Geography Series*. London: Routledge.
- World Commission for Environment and Development (WCED) (1987). *Our Common Future*, Oxford: Oxford University Press
- World Tourism Organization (WTO) (1998). *Guide for Local Authorities on Developing Sustainable Tourism*. Madrid, Egraf S.A.